

circuitry for matching said detected curves and corners against curves and corners of said stored index regions.

10. The circuit set forth in claim 6 wherein said single image is obtained at a first point in time, said circuit further comprising:

circuitry for generating from said established indices for a surface synthetic image of said surface representing said surface at a second point in time.

11. A system for identifying physical objects from infrared images of said objects, said system comprising: circuitry for receiving infrared images of physical objects;

circuitry for deriving a heat balance equation from said infrared images of said objects;

circuitry for generating indices of said objects pertaining to the infrared absorptivity and conductivity of said objects from said derived heat balance equation; and

circuitry for comparing said generated indices with prestored indices to thereby identify said physical objects.

12. The system set forth in claim 11 wherein said prestored indices are indicative of the infrared absorptivity and conductivity of said objects.

13. The system set forth in claim 11 wherein said system further includes:

circuitry for generating alternate images of an object from the known absorptivity and conductivity indices of said object, where the alternate image represents said object at a different point in time.

14. A system for identifying physical objects from infrared images of said objects, said system comprising: circuitry for receiving infrared images of physical objects;

circuitry for deriving a heat balance equation from said infrared images of said objects;

circuitry for generating indices of said objects pertaining to the infrared absorptivity and conductivity of said objects from said derived heat balance equation; and

circuitry for comparing individual index regions of said generated indices with similar individual regions of said prestored indices to thereby identify said physical objects.

15. The system set forth in claim 14 wherein said prestored indices are indicative of the infrared absorptivity and conductivity of said objects.

16. A system for identifying physical objects from infrared images of said objects, said system comprising: circuitry for receiving infrared images of physical objects;

circuitry for deriving a heat balance equation from said infrared images of said objects;

circuitry for generating indices of said objects pertaining to the infrared absorptivity and conductivity of said objects from said derived heat balance equation, said indices arranged in regions;

circuitry for detecting curves and corners from said regions of said indices; and

circuitry for matching detected curves and corners of regions of said generated indices with curves and

corners of regions of said prestored indices to thereby identify said physical objects.

17. The system set forth in claim 16 wherein said prestored indices are indicative of the infrared absorptivity and conductivity of said objects.

18. A method of identifying physical objects from infrared images of said objects, said method comprising the steps of:

receiving infrared images of physical objects;

deriving a heat balance equation from said infrared images of said objects;

generating indices of said objects pertaining to the infrared absorptivity and conductivity of said objects from said derived heat balance equation; and comparing said generated indices with prestored indices to thereby identify said physical objects.

19. The method set forth in claim 18 wherein said prestored indices are indicative of the infrared absorptivity and conductivity of said objects.

20. The method set forth in claim 18 further comprising the step of:

generating alternate images of an object from the known absorptivity and conductivity indices of said object, where the alternate image represents said object at a different point in time.

21. A method of identifying physical objects from infrared images of said objects, said method comprising the steps of:

receiving infrared images of physical objects;

deriving a heat balance equation from said infrared images of said objects;

generating indices of said objects pertaining to the infrared absorptivity and conductivity of said objects from said derived heat balance equation; and comparing individual index regions of said generated indices with similar individual regions of said prestored indices to thereby identify said physical objects.

22. The method set forth in claim 21 wherein said prestored indices are indicative of the infrared absorptivity and conductivity of said objects.

23. A method of identifying physical objects from infrared images of said objects, said method comprising the steps of:

receiving infrared images of physical objects;

deriving a heat balance equation from said infrared images of said objects;

generating indices of said objects pertaining to the infrared absorptivity and conductivity of said objects from said derived heat balance equation, said indices arranged in regions;

detecting curves and corners from said regions of said indices; and

matching detected curves and corners of regions of said generated indices with curves and corners of regions of said prestored indices to thereby identify said physical objects.

24. The method set forth in claim 23 wherein said prestored indices are indicative of the infrared absorptivity and conductivity of said objects.

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